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Dated: November 23, 2009

Signature: /Thomas W. Humphrey /  
(Thomas W. Humphrey)

Docket No.: OPTO 11  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Robert A. Kruger

Application No.: 10/672,137

Confirmation No.: 6106

Filed: September 26, 2003

Art Unit 3737

For: TISSUE SCANNER

Examiner: John Fernando Ramirez

**RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

This paper is in response to the Notice of Non-compliant Appeal brief mailed October 22, 2009. Applicant has revised section V to more clearly distinguish the reference characters from Fig. 7 by enclosing them in quotation marks, e.g. as in "DAS".

This brief contains one item under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

V.                      Summary of Claimed Subject Matter

## V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent Claim 10 is described in the specification beginning at page 10, line 14, and Fig. 7 of the drawings. The claim recites an imaging system comprising a “L538” detector array, an acoustic receiver (“DAS”) coupled to the detector array for receiving acoustic signals detected in response to radiant energy delivered to the tissue, an ultrasound receiver (Acuson “128 XP”) coupled to the detector array for receiving echoes from an ultrasonic beam, and an ultrasound beam steering circuit (“128 XP”) coupled to the detector array for causing the array to generate an ultrasonic beam. Furthermore, the system includes an image reconstructor (“Host Computer”) coupled to the acoustic receiver for performing a backprojection algorithm to generate a representation of acoustic signals generated at points within the tissue. In the image reconstructor the representation for a point is based upon signals from plural detectors in the detector array (cross referenced US Patent 5,713,356 at page 2, line 18).

Independent Claim 16 is described in the specification beginning at page 10, line 14, and Fig. 7 of the drawings. The claim recites a method of using an imaging system comprising coupling a transducer array L538 to tissue, receiving, with the transducer array, thermoacoustically generated acoustic signals originated within the tissue in response to radiant energy delivered to the tissue, performing (within Host Computer) a backprojection algorithm to generate a representation of acoustic signals generated at points within the tissue. The representation for a point is generated from signals from plural transducers in the transducer array (cross referenced from US Patent 5,713,356). The method further includes delivering a steered beam of ultrasound into the tissue and receiving echoes of the beam with the transducer

array L538 and an ultrasound receiver (DAS), and generating an image of the tissue from thermoacoustically generated signals and the ultrasound beam.

Applicant believes there is no fee due with this response. However, if a fee is due, please charge our Deposit Account No. 23-3000, under Order No. OPTO-11 from which the undersigned is authorized to draw.

Dated: November 23, 2009

Respectfully submitted,

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